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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PETER W. J. JONES

Appeal 2009-003,062
Application 09/094,052[1]
Technology Center 2800

Decided:[2] July 31, 2009

Before JOSEPH F. RUGGIERO, MARC S. HOFF,
and ELENI MANTIS MERCADER, *Administrative Patent Judges*.

HOFF, *Administrative Patent Judge*.

DECISION ON APPEAL

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[1] The real party in interest is Tenebreax Corporation.

[2] The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134 from a Final Rejection of claims 1, 4, 5, 7, 11 and 13-15[3]. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

Appellant's invention relates to a method and apparatus of minimization of reflections from surfaces of wide-angle field of view optical devices, wherein the apparatus includes a plurality of concentric circular vanes, each of the vanes including a first end proximate to the surface and a second end away from the surface. The first ends of the plurality of vanes are positioned closer together to each other than the second ends of the plurality of vanes (Spec. 1:8-10, 3:15-19).

Claim 1 is exemplary:

1. An apparatus for reducing reflection on a surface of an optical lens assembly that is configured so as to have a wide field of view (FOV), said surface corresponding to an input end of the lens assembly in which is inputted light of images being viewed, said apparatus comprising:

a plurality of concentric circular vanes, mounted in front of said reflective surface, each of said vanes including a first end proximate said surface, and a second end distal from said lens surface, wherein said first ends of said plurality of vanes are spaced apart from each other at a different distance than said second ends of said plurality of vanes are spaced apart from each other, and wherein said first ends of said plurality of vanes are spaced further apart from each other than said second ends of said plurality of vanes where light from an image to be viewed enters said second ends and exits said first ends and passes to said lens assembly input end; and

wherein said plurality of concentric circular vanes are arranged such that light reflecting from said lens surface is essentially not viewable by an observer located distal from said second ends and so that a user viewing

[3] Claims 2-3, 6, and 8-9 have been canceled. Claim 12 is withdrawn.

through the lens assembly can observe the image corresponding to the wide field of view of the lens assembly.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Brennan	US 4,323,298	Apr. 6, 1982
Softly	US 4,365,866	Dec. 28, 1982
Jones	US 4,929,055	May 29, 1990

Claims 1, 4, 5, 7, 11, 14, and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Jones in view of Softly.

Claim 13 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Jones in view of Softly and Brennan.

Rather than repeat the arguments of Appellants or the Examiner, we make reference to the Appeal Brief (filed December 7, 2007), Reply Brief (filed October 15, 2008), and the Examiner's Answer (mailed August 15, 2008) for their respective details.

ISSUES

The Examiner finds that even though Jones does not include the language "wide field of view", this feature may be inferred from Jones's disclosure that the optical lens may be binoculars, a telescope periscope, a rifle scope, or the like (Ans. 8, FF 5). The Examiner finds that the curved surface disclosed in Jones has an outermost lens surface that provides a field of view (Ans. 8, FF 2). The Examiner finds that while the present claims recite a wide field of view, the present claims have not recited any specific

limitation structure of the lens assembly for support of the term "wide" (Ans. 8).

Appellant contends that because there is no mention of *wide-angle field of view optical lens assembly* or *wide field of view lens assembly* in Jones or Softly as required by independent claims 1 and 15 (App. Br. 15), the combination fails to teach or suggest the claimed invention.

There is one principal issue in the appeal before us: Did Appellants show that the Examiner erred in finding that Jones teaches an apparatus for reducing reflection from the surface of a wide field of view optical lens assembly?

FINDINGS OF FACT

The following Findings of Fact (FF) are shown by a preponderance of the evidence.

The Invention

1. According to Appellants, the invention concerns a method and apparatus for minimizing reflections from surfaces of wide-angle field of view optical devices, wherein the apparatus includes a plurality of concentric circular vanes, each of the vanes including a first end proximate to the surface and a second end away from the surface. The first ends of the plurality of vanes are positioned closer together to each other than the second ends of the plurality of vanes (Spec. 1:8-10, 3:15-19).

Jones

2. Jones teaches a structure comprising a plurality of tubular elements positioned in front of a light reflecting surface of an optical device to substantially reduce the light reflection, wherein the tubular elements

form a grid-like structure and the aspect ratio of each of the elements has a selected relationship with respect to the aspect ratio of the field of view of the optical device on which the structure is positioned, wherein the aspect ratio of a tubular element is defined as the ratio of the width, or effective, diameter of the opening thereof to the length thereof. The optical device includes a curvature on the front surface. (Figs. 1-2, col. 2, ll. 5-16, col.3, ll. 41-43).

3. Jones teaches a plurality of interconnecting struts effectively forming honeycomb-like tubular elements, wherein the cross-sectional areas of the tubular elements are arranged to be approximately equal so that their aspect ratios are also approximately the same and approximately equal to the aspect ratio of the field of view of the optical device (col. 5, ll. 27-34).

4. Jones teaches that the tubular elements may be arranged so that they are other than at a 90 degree angle with respect to the reflective surface, for example an anti-reflective structure used with a non-optical device (wherein "non-optical" is defined to mean that a device that does not provide any optical magnification, e.g. a mirror or a vehicle windshield) (Fig. 10, col. 5, ll. 38-46).

Softly

5. Softly teaches a light masking device including a support frame adapted to be positioned in front of the screen and an optical filter supported thereby, wherein the optical filter comprise a grating of spaced, elongated planar slats extending horizontally across the width of the screen, the slats being differentially inclined from the horizontal in the directions of their widths so as to converge on a horizontal line at a selected height and a selected distance from the screen and wherein the slats are pivotally

connected to the support frame for pivotal movement about respective horizontal axis. (Abstract).

6. Softly teaches the grating horizontally aligned with the center of the screen, wherein in a television studio most of the ambient light falls towards the monitor screen from an upward direction rather than from the side. Thus, the horizontally extending slats are suitably positioned to intercept this light which would otherwise be reflected from the screen which will impair the quality of the image while not interfering with normal viewing of the image (Figs. 2-4, col. 2, ll. 51-61).

Brennan

7. Brennan teaches a wide field of view goggle system, having a field of view (FOV) seen by both eyes of sixty degrees, wherein each eye has a field of view of forty degrees (Fig. 5, col. 3, ll. 14-17).

PRINCIPLES OF LAW

In an appeal from a rejection for anticipation, the Appellant must explain which limitations are not found in the reference. *See Gechter v. Davidson*, 116 F.3d 1454, 1460 (Fed. Cir. 1997) ("[W]e expect that the Board's anticipation analysis be conducted on a limitation by limitation basis, with specific fact findings for each *contested* limitation and satisfactory explanations for such findings.")(emphasis added). *See also In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006).

On the issue of obviousness, the Supreme Court has stated that "the obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 419 (2007). Further, the Court stated "[t]he combination of

familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Id.* at 416. "One of the ways in which a patent's subject matter can be proved obvious is by noting that there existed at the time of the invention a known problem for which there was an obvious solution encompassed by the patent's claims." *Id.* at 419-420.

The determination of obviousness must consider, *inter alia*, whether a person of ordinary skill in the art would have been motivated to combine the prior art to achieve the claimed invention and whether there would have been a reasonable expectation of success in doing so. *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1125 (Fed. Cir. 2000). Where the teachings of two or more prior art references conflict, the Examiner must weigh the power of each reference to suggest solutions to one of ordinary skill in the art, considering the degree to which one reference might accurately discredit another. *In re Young*, 927 F.2d 588, 591 (Fed. Cir. 1991). If the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984). Further, our reviewing court has held that "[a] reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994); *Para-Ordnance Mfg., Inc. v. SGS Importers Int'l., Inc.,* 73 F.3d 1085, 1090 (Fed. Cir. 1995).

ANALYSIS

Claims 1, 4, 5, 7, 11, 14, and 15

The Examiner finds that even though Jones does not include the language "wide field of view," this feature may be inferred from Jones's disclosure that the optical lens may be binoculars, a telescope periscope, a rifle scope, or the like (Ans. 8). The Examiner finds that the curved surface disclosed in Jones has an outermost lens surface that provides a field of view (Ans. 8, FF 2). The Examiner finds that, while the present claims recite a wide field of view, the present claims have not recited any specific limitation structure of the lens assembly for support of the term "wide" (Ans. 8). The Examiner also finds that the term "wide", as claimed, is a relative term absent any reference used to make a comparison, thus any outermost lens surface of an optical device inherently defines a field of view having a particular wide dimension (Ans. 8). Therefore, the Examiner finds that the lens assembly disposed in the optical device as provided by Jones defines a field of view having a particular "wide" dimension (Ans. 8).

Appellant contends that because there is no mention of *wide-angle field of view optical lens assembly* nor *wide field of view lens assembly* in Jones or Softly as required by independent claims 1 and 15 (App. Br. 15), the combination fails to teach or suggest the claimed invention.

We agree with Appellant's position that the combination of Jones and Softly does not disclose eliminating reflection off the surface of "a wide field of view lens assembly," as claims 1 and 15 require (FF 4). Although Jones discloses that tubular elements may be arranged so that they are positioned at an angle other than 90 degrees with respect to the reflective

surface and that the anti-reflective technique taught in Jones can be used with "many different types of optical devices or other reflective surfaces including binoculars, telescopes, periscopes and the like," Jones lacks a teaching of positioning of tubular elements at other than a 90° angle with respect to the reflective surface of an optical assembly configured to have a wide field of view, or of any device providing optical magnification (FF 4).

Therefore, because the Appellant has established error in the Examiner's rejection, we reverse the Examiner's rejection of claims 1, 4, 5, 7, 11, 14, and 15 under 35 U.S.C. § 103.

Claim 13

As noted *supra*, we reversed the rejection of claim 1 from which claim 13 depends. We have reviewed Brennan and find that it does not remedy the deficiencies noted with respect to the combination of Jones and Softly. We will therefore reverse the Examiner's rejection of claim 13 under 35 U.S.C. § 103 as being unpatentable over Jones in view of Softly and Brennan, for the same reasons expressed with respect to the § 103 rejection of parent claim 1 as unpatentable over Jones in view of Softly, *supra*.

CONCLUSIONS OF LAW

Appellants have shown that the Examiner erred in finding that Jones teaches an apparatus for reducing reflection from the surface of a wide field of view optical lens assembly.

ORDER

The Examiner's rejection of claims 1, 4, 5, 7, 11, and 13-15 is reversed.

REVERSED

ELD

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